12-2012

Effects of Training Peer Tutors to Deliver Praise Statements, Prompts, and Correction Procedures on Academic Skills of Students Who Have Severe to Moderate Disabilities

Lyndi Brooks
Utah State University

EFFECTS OF TRAINING PEER TUTORS TO DELIVER PRAISE STATMENTS, PROMPTS, AND CORRECTION PROCEDURES ON ACADEMIC SKILLS OF STUDENTS WHO HAVE SEVERE TO MODERATE DISABILITIES

by

Lyndi Brooks

A creative project submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF EDUCATION

in

Special Education

Approved:

_____	_____
Robert Morgan, Ph.D. Major Professor	Ben Lignugaris/Kraft, Ph.D. Committee Member
_____	_____
Sarah Bloom, Ph.D. Committee Member	Mark McLellan, Ph.D. Dean of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2012

Abstract

Peer tutors have been utilized in many settings to work with various individuals, including those with disabilities. There has not been considerable research into the training of peer tutors for students who have severe disabilities in the junior high setting and the effect the training has on the performance of students with disabilities. The purpose of this project was to determine whether training junior high school-aged peer tutors on the use of praise statements, a prompt hierarchy, correction procedures, and data collected to track tutee performance increased academic skills of students with disabilities. Seven peer tutors participated. Five students (i.e., tutees) with disabilities were involved. Multiple tutors worked with each tutee according to a block schedule. By training peer tutors on the use of specific skills, such as use of praise statements, prompt hierarchies, error correction procedures, and data collection, peer tutors showed increased tutorial skills as evidenced by tutor observation scores. The students with disabilities evidenced increased academic skills as measured by differences in post-test scores compared to pre-test scores in curriculum-based assessments. Both tutors and tutees reported high levels of satisfaction following the peer tutor experience. The project provided data on the effectiveness of peer tutoring for increasing skills of students with severe to moderate disabilities in a junior high setting.

INTRODUCTION

Special education teachers are always looking for better ways to serve the diverse needs of their students with disabilities (Miracle, Collins, Schuster & Grisham-Brown, 2002). Students who have severe to moderate disabilities sometimes require one-on-one assistance, which is difficult to give with teacher caseloads that are often large (Carlton, Litton & Zinkgraf, 1985). Some special education teachers utilize peer tutors in order to increase instructional time for students (Carlton et al., 1985). The various kinds of peer tutoring used include (a) heterogeneous grouping where tutors and tutees are in the same grade, but the tutor has a higher skill level, (b) homogeneous grouping where tutees are taught by those with related skills, (c) cross-age tutoring where the tutor and tutee are different ages, and (d) reverse-role tutoring where a student with disabilities tutors a student without disabilities (Utley & Mortweet, 1997). This project used heterogeneous and cross age tutoring. A literature review conducted by Stenhoff and Lignugaris/Kraft (2007) found that structured peer tutoring programs, which help students with disabilities academically and socially, offer students with disabilities a better likelihood of success than no tutoring alone, or better than reliance on the classroom teacher. However, questions remain about methods used by peer tutors and skills that they teach. Given training by the teacher, what instructional methods can peer tutors use to effectively teach skills? And what skills do they teach? What evidence exists for increased skills as a function of peer tutoring?

Literature Review

The purpose of this literature review was to investigate different components of peer tutoring and their effect on students with severe to moderate disabilities in terms of academic and social skills. Articles selected for the literature review were found online via EBSCOhost and ERIC and were published in the years 1991 - present. Search terms included peer tutor, disability, prompts, and peer tutor training.

Peer tutoring can be applied to an entire class of students. Research was conducted by Laushey and Heflin (2000) to examine the effects of whole-class tutoring on certain social skills for students with and without disabilities. The researchers selected two kindergarten classes at two different schools to participate in the study. Two 5-year-old boys with autism participated in the study because they struggled with social cues, waiting for others to respond, and engaging in conversations. The boys were on similar levels academically. The participants in this study were taught using a method where all members of the kindergarten classes, including the students with disabilities and teachers, were taught on what they called a “buddy system”. Each member of the classroom learned that during buddy time, they needed to stay, play, and talk with their buddy. Peers were given buddies each day. Buddies were assigned on a rotating schedule so that each student had the opportunity to play with a different person each day, including the students without disabilities. The social skills that were observed in this study were asking for something and waiting for a response, getting attention of others appropriately, waiting turns, and looking at the person talking.

Results indicated that when buddy time was in place, the students with autism showed an increase in interacting with peers, looking towards the person who was talking to them, practicing turn taking, and waiting. Buddy time also gave the students increased positive social contact. Results suggested that training and a supportive structure for peer tutors increased social skills. Since the children with autism had the opportunity to be paired with a different buddy each day, they also seemed to have an easier time generalizing their social skills to new classmates.

In a study using peers to teach students with disabilities, Tekin-Iftar (2003) trained peer tutors in how to deliver instruction using the response prompting strategy called simultaneous prompting (SP). Unlike Laushey and Heflin (2000), the tutees in this study were working on academic skills rather than social skills. Here, SP was used to teach students to verbally identify community signs when shown a picture. The instructor used SP to give the student a prompt and the target stimuli at the same time. There was not an opportunity for the student to respond during instruction, however, once instruction was finished, the student could respond with a correct response, incorrect response, or no response. After consulting with teachers and counselors, the author systematically selected four female peer tutors. Some of the prerequisite skills for tutors included ability to follow directions, read and write accurately, and be willing to work with students who had disabilities. The selected peer tutors were given a pre-test in which they were asked to deliver SP while teaching community signs. None of the peer tutors were able to do so. Tutors were trained on how to teach using SP in two separate sessions at their schools**.** They remained in training until each of them

delivered SP with 100% accuracy. During the trials, peer tutors were paired with a same age student who had a disability. Two females and two males with disabilities ranging in age from 10 to 13 were chosen. Prerequisite skills for the tutees included the ability to focus, follow directions, and select desired reinforcers. Disabilities included mild intellectual disabilities, Down syndrome, and specific learning disabilities. Tutors delivered SP with a 99.8% average fidelity. A week after teaching ended, a post-test revealed that the students with disabilities had maintained and generalized the skills they were taught by their peer tutors. The results of this study showed that peer tutors were able to deliver SP as reliably as adult teachers with increased academic skills of tutees. One limitation was that there were only four peer tutors and four tutees with a limited range of disabilities. The findings from Tekin-Iftar (2003) begin to build a case for peer tutors increasing academic as well as social skills of their age mates.

In 2002, a study by Miracle et al. evaluated the effects of constant time delay (CTD) delivered by teacher or peer instruction to teach sight words to students with moderate to severe disabilities. The students who were selected for this study included four students with a range of disabilities including moderate mental retardation, Down syndrome, cerebral palsy, seizure disorder, and congenital glaucoma. These students were in secondary school and ranged in age from 14 to 20. The students with disabilities were selected because they were all in a self-contained classroom, had at least one Individualized Education Plan (IEP) goal of reading basic sight words, had previous experience being instructed on sight words, and had worked with peer tutors for at least one year. After talking to current peer tutors about the research study, five

female 17- and 18-year-old peer tutors volunteered to participate. Researchers required that the selected peer tutors have at least two semesters of experience prior to participating in the study. The training for the study was carried out in three 30-min sessions before school began, which was similar to Tekin-Iftar (2003). Before the tutors started the study, they had to practice conducting the trial with no more than one incorrect step. The steps included: calling the student to the table to work, asking if the student was ready to work, showing the student a word, and either praising the student for getting the word correct or giving the student the correct answer if incorrect and giving them another chance to respond correctly. During the study trials, the peer tutor or teacher sat across the table from the peer with whom he/she was working. The tutors were successful at teaching seven out of eight sight words. Like Tekin-Iftar (2003) discovered, researchers in this study found that teacher and peer instruction are equally effective in teaching sight words to student with disabilities. They also discovered that peer tutoring increased the amount of academic instruction per day for students with special needs. A limitation of the study is that the teacher remained the same in the experiment, but the peer tutors did not work with the same student twice, which may have affected performance due to the teacher/student having a more familiar relationship. Some recommendations for future research included using the same peer tutor vs. multiple peer tutors, increasing the social skills of students with disabilities, increasing student appropriateness while working with teacher vs. peer tutor, and training peer tutors to use different tools and prompting help.

Research conducted by Burns (2006), examined training peer tutors on the pause, prompt, and praise (PPP) method to improve reading skills for students who received special education services. The goal of research was to increase independence for students as they made self-corrections without any help from others. In this study, PPP involved training peer tutors to work one-on-one with students struggling in reading. Appropriate reading material included a portion of words read correctly along with some words that were unfamiliar to the learner. Pausing was giving the student up to five seconds to make a correct response. If a correct response was not made after that time, the tutor verbally prompted. Prompting involved giving a clue so that the learner could try and figure out the answer on his/her own. The prompt given by the tutor, was dependent on the response, or non-response, of the learner. After a self-corrected response, the tutee was given verbal praise. The study was conducted at a secondary school for students with moderate disabilities. The participants had an average age of 15-years-old. Tutors had a mean reading age of 8.58 years and tutees had a mean reading age of 7.0 years. Two students were selected to be the tutees in the study, one boy and one girl, because they had the lowest reading scores in their grade. Subsequently, one boy and one girl peer tutor were also chosen, so that buddies would be the same sex. The tutors were also required to have a reading level that was above that of the student they were to tutor, have a respectable and compassionate attitude toward the tutee, and have a high attendance rate. Similar to Tekin-Iftar (2003) and Miracle et al. (2002), tutors were required to attend a 30 min training session on PPP before the trial began. The trainer used large and colorful charts, role plays, and

brainstorming to teach the tutors about responses, praising, and different kinds of prompts. During the first few sessions after research began, the tutors struggled to pause and prompt. Instead, the tutor would give the tutee the correct answer as soon as an error was made. As time went on, and the tutors became more comfortable, they were more consistent at following PPP. Praise was high throughout the study. After 14 reading sessions, two times a week for 7 weeks, research showed an increase in self-correction rates for the students with disabilities. Although, it was not the purpose of the study, the researcher also observed the lasting relationships that came from tutoring, watching the relationships continue even after research concluded. A limitation of this study is the small sample of students that were used.

Although each of these studies demonstrate positive effects of using peer tutors to increase skills of tutees, they fall short, collectively, in providing a comprehensive evaluation on the usefulness of peer tutor training in teaching academic skills. Several limitations are noteworthy. First, the reviewed studies do not involve junior high school students with significant disabilities. This group of students usually falls far behind in academic and social skills, yet they are heavily influenced by their same-age peers without disabilities and make good candidates for working with peer tutors. Second, in some cases, the reviewed studies had small sample sizes, making generalization to the population of tutees questionable. Third, in most of the reviewed studies, the preferences for students with disabilities were not examined, therefore making it hard to know for sure if peer tutors are preferred to students with significant disabilities. Some recommendations for future research in the reviewed literature include

conducting similar studies with different age groups and disability levels, looking into methods of training for tutors, and training peer tutors to use different tools and prompting help; all of which will be examined in this project.

In Stenhoff's and Lignugaris/Kraft's (2007) literature review of 20 research studies of secondary-aged tutees, authors noted that training peer tutors before initiating tutoring correlated with a positive outcome. The review also suggested that monitoring tutors while working was important, so that corrections and reinforcement could be immediately delivered. Stenhoff and Lignugaris/Kraft proposed that teachers focus on training peer tutors how to implement different instructional procedures while they work with students. The researchers also recommend that future research report the training they deliver to tutors.

The purposes of this project were three fold: (a) to improve the performance of junior high school-aged peer tutors on the use praise statements, a prompt hierarchy, correction procedures, and data collection helps them to be more successful as tutors, (b) to determine whether the tutees evidence an increase in academic skills as a function of tutorial, and (c) to find out if the tutor and tutee enjoyed the training and tutoring process. The specific question to be addressed was "given instruction by a trained tutor in an academic skill targeted by the tutee's IEP, will tutor-delivered instruction increase the academic skill of the tutee."

METHOD

Participants

The project was conducted with 8th and 9th grade peer tutors, ages 13 to 15. Seven male and female peer tutors from different class periods were selected who met the prerequisite skills for inclusion in the project. Prerequisite skills included being registered for at least one peer tutor class, agreeing to participate in the project, receiving no support from special education, being a first time peer tutor, following directions, and attending school on a highly consistent basis.

The students with disabilities who participated in the project included 7th and 8th graders, ages 12-15, who met the prerequisite skills for inclusion in the project. Five students with disabilities participated in the project. To be selected for the project, tutees were required to have Individualized Education Program (IEP) goals to increase academic skills and the absence of severe behavior problems. One of the commonalities in each of the tutees was that they all participated in an alternative assessment at the end of the school year instead of common core testing. Table 1 breaks down information about each tutee such as (a) classification, (b) level of disability, (c) grade/age, (d) and information about their last assessment.

The participants were paired based on the judgment of the teacher. This project used heterogeneous and cross age tutoring (no more than 3 years age difference).

Table 1

Specific Tutee Information

Initials	Classification	Level of disability	Grade /Age	Utah Alternative Assessment (UAA) Goal	UAA Score 2011/2012 School Year
B. H.	Multiple Disabilities	Severe	7th/12	Unknown	N/A
J. R.	ID (Down Syndrome)	Severe	7th/12	Language Arts – Verbally expresses own first name when asked Math – Identifies coins	3/3 1/3
S. H.	Other Health Impairment	Moderate	7th/12	Language Arts – Retells experiences Math – Completes authentic addition problems	2/3 3/3
I. E.	Autism	Moderate	7th/13	Math – Sets and responds to a timer	3/3
M. L.	Other Health Impairment	Severe	8th/15	Language Arts – Makes a phone call to a friend	3/3

Setting and Schedule

The project took place in a public junior high school located in Layton, Utah. Peer tutor training and peer tutoring took place in classrooms, in halls, and a nearby conference room. The school was on an A/B block, which made classes 90 min long every other day (4 classes per day).

Each tutee had one to two peer tutors who worked with him/her individually over the course of at least 10 sessions. Peer tutors served for only one class period and were assigned specific academic skills to work: math, English, or a little of both. Tutors consistently worked with the same tutee.

Measures

Tutor performance. Measures of tutor performance based on observation included the following: (a) rate of praise statements (combined academic and behavior-specific) per min, (b) percent of opportunities in which the least prompt necessary was provided and delivered correctly, (c) percent of opportunities in which corrections were carried out with all steps correct, and (d) percent of data collected correctly. Observations of tutor performance occurred before and after 10 instructional sessions. Data was marked on an observation form (Appendix D) by the teacher. Each tutor participant was observed for a minimum of 35 min each.

Tutor survey and pre-test. The teacher provided peer tutors with a short survey (Appendix A) on the first day of class to determine whether they qualified to participate in the project. The survey addressed qualifications related to the tutor's proficiency in the academic curricula to be taught to the tutee. The peer tutors who qualified and elected to participate in the project were administered a pre-test (Appendix B) by the teacher. The pre-test consisted of questions about specific instructional skills to be learned by the peer tutor: praise statements, a prompt hierarchy, correction procedures, and data collection.

Tutor post-test. After training, peer tutors were given a post-test (same questions as pre-test, but in a different order) to see if the training increased correct tutor response. After scores from the test were calculated, the tutors who passed were paired with the tutee that they would then work with for the remainder of the project.

Tutee performance. The second research question related to the tutee's academic skills before and after peer tutor intervention. Therefore, specific measures of

each tutee's skills were collected prior to and immediately following completion of tutoring. The measures of performance included accuracy of TouchMath adding, TouchMath subtracting, money value and recognition, adding fractions, dividing fractions, dividing, multiplying equations, dividing decimal equations, solving proportions, FRY sight words, Reading for all Learners (kindergarten to 3.6 grade reading and comprehension), Signs for Sounds spelling, verbal personal information, and written personal information. Post-tests of tutee performance occurred after a minimum of 10 instructional sessions after tutors and tutees were paired together. The same test was given pre and post, with changes made to the order of questions. See Appendix E for specific examples. Positive or negative trends from pre- to post-test were used as measures of the tutor's impact on tutee performance.

Tutor and tutee satisfaction. Each tutor and tutee was given a four-question survey at the end of the project to measure social validity (Appendix F). The tutors were asked (a) how well they liked being a peer tutor, (b) how well they liked the training, (c) how likely they would be to recommend peer tutoring to friends, and (d) how they would feel about peer tutoring in the future. The tutees were asked (a) how much they liked having a peer tutor, (b) how effective of a helper the peer tutor was, (c) how much they liked the specific peer tutor, and (d) how they would feel about having a peer tutor in the future. Each question was rated on a scale from 1 to 5, with 5 being the best. The surveys were anonymous.

Tutor Training Procedures

After the pre-test was given, the teacher then trained the tutors on the use of praise statements, a prompt hierarchy, correction procedures, and data collection. Training procedures first involved arranging for peer tutors to watch a PowerPoint (Appendix C), given by the teacher, in which each skill was broken down into component steps so the peer tutors could identify specific behaviors. The teacher described the components of the PowerPoint slides and tutors were encouraged to ask questions. Second, peer tutors role played with other peer tutors in the group until they exhibited each skill. Each time an error was made by the tutor during role play, the teacher corrected the tutor using the correction procedure. When an error was made, the teacher stopped the tutor immediately, gave the correct answer, let the tutor practice the correct way, and gave a delayed test later on in the training to make sure the tutor remembered. When tutors responded correctly during role plays, the teacher gave verbal praise. The following procedures were used to train peer tutors in praise statements, a prompt hierarchy, correction procedures, and data collection.

Training on how to deliver praise statements. Tutors were taught to verbalize praise statements to tutees based on academic and behavioral success. Tutors were taught to give a verbal praise no less than three times per min. When the tutor's praise rate was not high enough, the teacher talked to the tutor and offered examples of times when praise was appropriate. The teacher provided tutors with a list of praise words and phrases so they could mix up the order in which they praised the students.

Training of prompt hierarchies. A prompt hierarchy is a method of fading assistance intended to help students respond to a natural cue (West & Billingsley, 2005).

Assistance is faded only on those occasions when a student does not respond to the natural cue (e.g., a long division math problem on a worksheet). The prompt hierarchy used in this project ranged from *one word, short question, long description, and model plus description*. For example, *a model plus description* involved the tutor completing all steps of a long-division problem (e.g., 4000÷25) while describing steps to the tutee followed by the tutee performing steps. A *long description* involved the tutor describing each step of the long-division problem as the tutee performed the steps (e.g., "First, divide 40 by 24. Good! Now, subtract 24 from 40. Can you divide 15 by 25? No, so bring down the zero. One hundred and fifty divided by 25 is what? Right, it is six! Next …"). *A short question* involved the tutor saying "What do you do next?" A *one-word prompt* involved the tutor asking "next?" Tutors learned to use the least restrictive prompt, that is, the least necessary prompt to produce a complete response from the tutee. Prior to using any prompt, tutors were taught to use a 5 s time-delay procedure (Schuster et al., 1998) allowing tutees time to process the next step in the academic task. Prompts were faded so that students would not become reliant on one particular prompt. For prompts in other academic areas, such as reading comprehension, specific language used in prompts were modified by the teacher.

Training of correction procedures. Tutors used correction procedures when an error was made by the tutee to prevent future errors. The tutor verbalized the correct answer immediately following the error and provided the tutee another chance to respond correctly by repeating the same academic question/problem later in the same session. When an error occurred, the tutor was trained to intervene by either

verbalizing the correct answer or saying, “Let’s take a look at that one again”, depending on the subject being taught. The tutor was taught to pause for 5 s as the tutee examined the error. If the tutee did not initiate a response to correct the error, the tutee used the least prompt sequence (above) to guide the tutee to get the correct answer. Tutors were trained to reintroduce the incorrect problem/question at a later time in the same session.

Training in data collection. Tutors were taught to collect data on tutee performance in each lesson. Tutors computed data as percent correct. Step-by-step instructions were shown on the PowerPoint and presented verbally by the teacher.

Orientation of the Tutor and Tutee

Once the tutor and tutee were paired together, they stayed a team for the remainder of the project. The tutor received academic and behavior information about the tutee. The pair had an entire class period to get to know one another before work began the following session.

Tutorial of the Tutee

The tutor began working with the tutee on academic skills and practiced giving praise statements, a prompt hierarchy, and correction procedures with the tutee when opportunities arose. Additionally, tutors were encouraged to provide contingent praise statements immediately following correct responses by the tutee. The teacher observed the tutor during all sessions, offering praise and making corrections as needed.

Observation of Tutors

Informal observations occurred daily in order to correct mistakes that arose during work time. The teacher coached tutors on the specific skills he/she needed to work on. In some cases, the tutor needed more time to role-play with the teacher and observe the teacher working with the tutee.

The tutor was formally observed on two occasions. The first observation took place the day after the tutor and tutee had been paired together. The second observation occurred after the pair had at least 10 sessions to work together. Appendix D presents the observation form. The observation lasted for at least 35 min. Instructional targets on which the tutors were evaluated include praise statements, use of a prompt hierarchy (one word, short question, long description, or model plus description), use of a correction procedure (provide correct answer, re-cue, help, distract, re-cue, praise), and precision of data collection. The teacher collected data on one target behavior at a time and moved sequentially through targets (e.g., praise statements for 5 min, prompts for 15 min, corrections for 15 min, etc.). The teacher reviewed the data and provided feedback to the tutor.

Praise statements. Observation of praise statements lasted for 5 min at the onset of observation. The teacher looked for praise of three or more times per min. Praise was calculated as praise rate per min.

Prompt hierarchy. Observation of prompts lasted for 15 min with the teacher recording both prompt opportunities and correct use. A score was calculated for percent of correct prompts by dividing prompt opportunities. A score was calculated for percent of correct prompts by dividing the correct prompts by total opportunities.

Correction procedures. Observation of correction procedures lasted for 15 min with the teacher recording correction occasions and correct use of error correction procedures. A score was calculated by dividing correction procedures used correctly by missed correction plus correct correction (i.e., total occasions).

Data collection. Observation of data collection took place at the same time as observation of prompting as well as observation of correction procedures. A score was calculated for percent of data collected correctly by total data collection opportunities.

Analysis of Data

Tutors. The peer tutors' pre- and post-test scores were recorded on a spreadsheet. Observation information from the observation form was also recorded on this spreadsheet. Data were analyzed using descriptive statistics. The teacher examined differences between pre- and post-test scores, range of differences, and number of tutors with higher post-test scores.

Tutees. The pre- and post-test scores for each tutee were first recorded on a subject specific data sheet and then the scores were transferred to a spreadsheet showing all scores. Data were analyzed using descriptive statistics. The teacher examined differences between pre- and post-test scores, range of differences, and number of tutees with higher post-test score.

RESULTS AND DISCUSSION

Research Question 1

The first research question related to whether peer tutor training would be successful in increasing the tutors knowledge and use of praise statements, a prompt

hierarchy, correction procedures, and data collection. As shown in Figure 1, tutors received high scores on the post-test. Seven out of seven tutors improved from their pre-test score. Three out of seven tutors received 100% on their first post-test and the other four tutors received 94% on their first post-test, only missing one question. The questions missed on the test included, "When should you use the correction procedure?", "What is the shortest amount of time you should wait for a student to respond and/or process what you have said?", and two tutors missed, "What are the steps in a correction procedure?". Tutors who missed a question were asked to go back and look at the one they missed to determine the correct answer. All tutors scored 100% after the first opportunity to correct their mistakes.

Tutors demonstrated that they were capable of delivering praise statements, as shown in Figure 2. They were trained and expected to deliver 3 praise statements per min. However, praise rates fluctuated between tutors and observations. Praise rates were much lower than expected. The tutors followed instructions giving praise when the tutees were instructed using discrete trial, such as reading FRY sight words and giving verbal personal information, but struggled to give praise when tutees were doing independent work, such as written personal information or written math work. Tutors often praised once the student finished a page of work, but most tutors did not praise while the student was doing independent work. Tutors were instructed to pay attention to the work the tutees were doing so they could praise and correct mistakes. Tutors often mentioned that "watching" the tutees do his/her written work was boring and

uneventful. The teacher observed that tutors were much more distractible when the tutee was working on written work.

Figure 1. Tutor pre- and post-test scores.

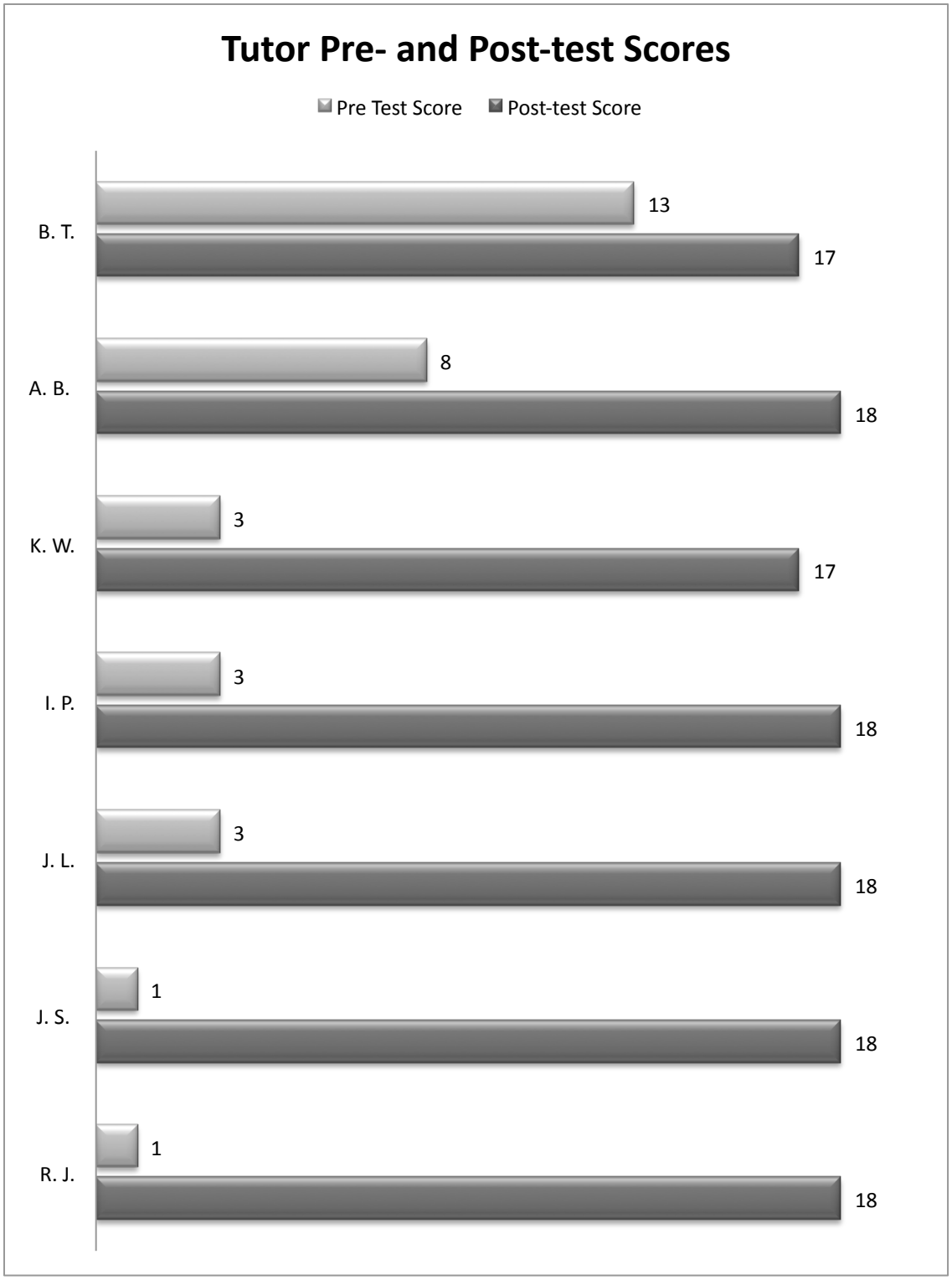
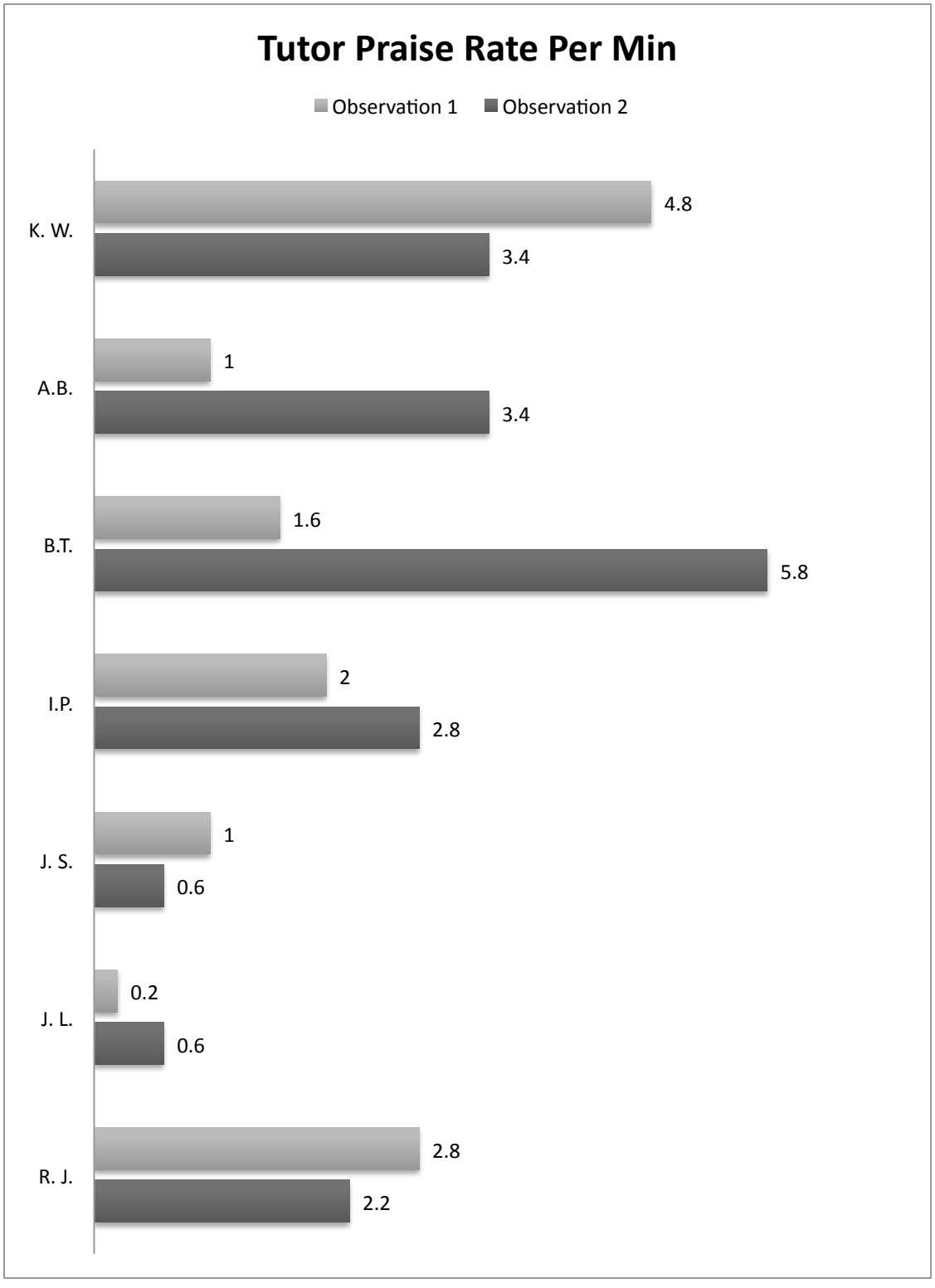


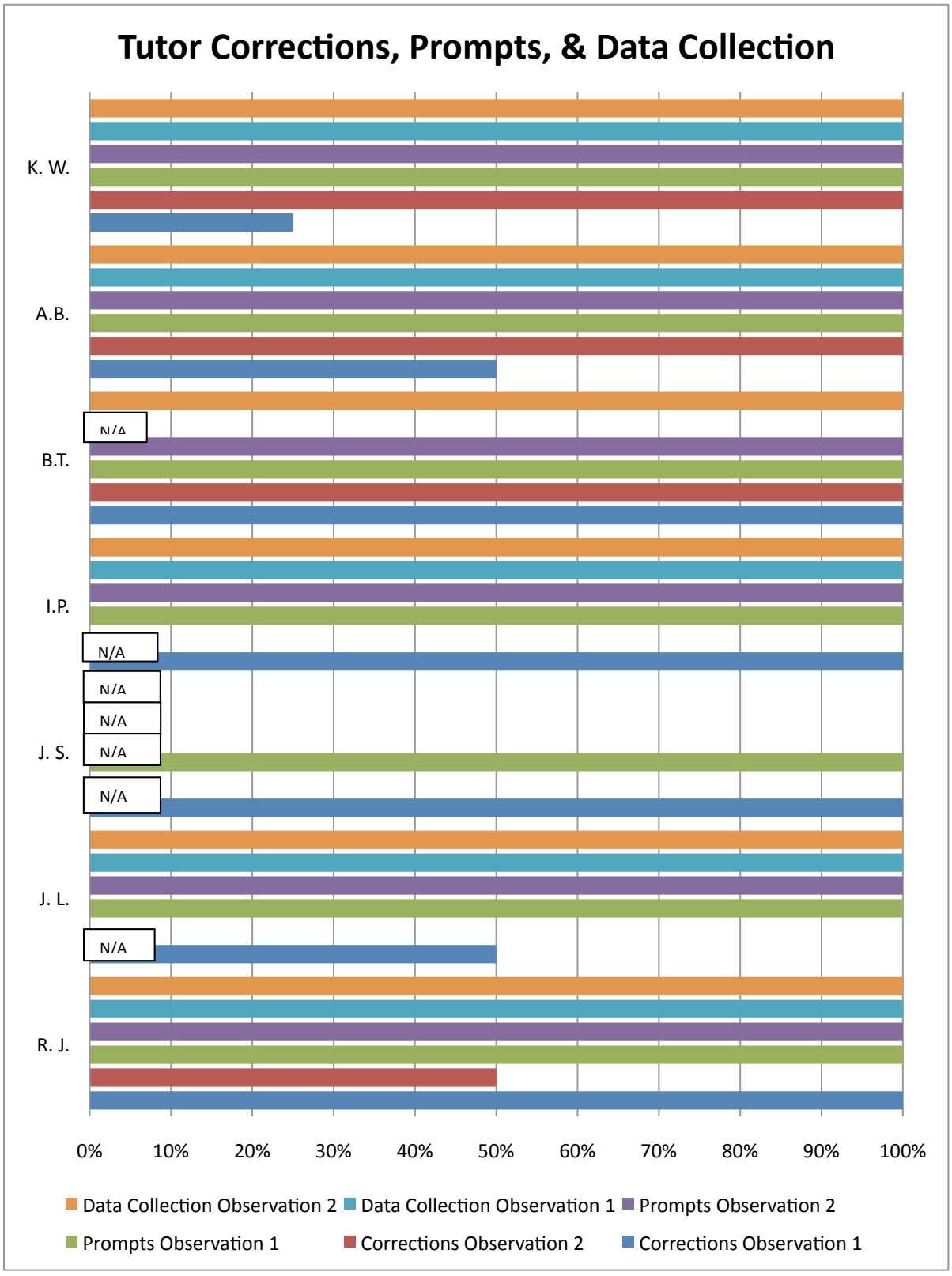
Figure 2. Tutor praise rate per min.


Tutor Praise Rate Per Min
Observation 1
Observation 2
K. W.
4.8
3.4
A.B.
1
3.4
B.T.
1.6
5.8
I.P.
2
2.8
J. S.
1
0.6
J. L.
0.2
0.6
R. J.
2.8
2.2

Tutors demonstrated that they were capable of using a prompt hierarchy and correction procedures, as well as taking accurate data, after training and role play opportunities as shown in Figure 3. Prompts, corrections, and data collection were not always observed in the formal observations, which elicited a N/A. In the 30-min observation, there was occasionally no opportunity for these behaviors to be observed.

Training for peer tutors on praise statements, a prompt hierarchy, correction procedures, and data collection was generally successful as shown by increased post-test scores compared to pre-test scores in seven out of seven cases. Peer tutors were able to apply the training they received as evidenced by high scores on the first formal observation. While no control group was present for comparisons, these scores were high in the teacher's estimation compared to previous observations with untrained tutors. All post-test scores were higher except for praise statements. Praise statements continued to be difficult for tutors through all sessions. Tutor's praise rates were high when instructing tutees using discrete trial format, but dropped when tutees worked on independent written work. The tutors often praised once the written work was finished, however, they found it difficult to praise as tutees were working. Perhaps peer tutoring programs should devise a system for training tutors to deliver praise in a way that appears natural and contextually appropriate to the tutee and teacher. Instead of having an expectation to praise a certain number of times per min, perhaps the tutors should be taught specific times when praise should occur, such as when the student gives a correct answer (verbal and/or written) and when the student is demonstrating appropriate behavior.

Figure 3. Tutor corrections, prompts, and data collection.



Informal observations were important for the tutors. Frequently during observations, tutors would ask important questions. Also, each time an error was made by the tutor during observations, the teacher corrected the tutor using the correction procedure. When an error was made, the teacher stopped the tutor immediately, gave the correct answer, let the tutor practice the correct way, and gave a delayed test later on in the observation to make sure the tutor remembered. Time was also spent during observations letting the tutor observe the teacher model the procedures to let the tutor see first-hand how it should be done. Observations allowed the teacher to assure that teaching was going as planned/expected and to make corrections as needed.

Research Question 2

The second research question related to whether academic skills of the tutees would increase after working with a peer tutor. As shown in Table 2, results reveal that peer tutors are effective in teaching students who have mild to severe disabilities as measured by increased academic skills of tutees in post-test scores compared to pre-test scores. Each tutee who spent a full complement of at least 10 sessions with a peer tutor evidenced increased scores on the academic skills test representing content on which he/she was working. Results were summarized by examining difference scores for tutees for each academic area. Out of 27 academic areas, there was an increase in skills for 23, no improvement for three, and a decrease of skills for one. In all, a total of 110 new skills were learned.

As shown in Table 3, increased performance was evidenced in some curricula but not in others. For example, more progress was noted for math (fractions, adding, subtracting, dividing, etc.) because once a student learns one set of skills, it applies to many kinds of math problems. Progress was the slowest in spelling because the tutees were expected to master one word and spell it correctly for three consecutive days before they were able to start learning a new word.

In cases where the tutors were unable to increase academic skills of participants, it may have been due to (a) incorrect use of the tutoring skills by the tutor, and/or (b) unforeseen behavior issues. The behavior issue observed was failure of the tutee to follow directions. When these omissions were observed, the teacher intervened by (a) talking to each party about the issues and/or (b) having the tutor observe while the teacher worked with the tutee the correct way.

Some tutees worked better with peer tutors than others. For example, J. R, a 7th grader with Down syndrome, enjoyed the attention and friendship of her peer tutors, but did not like to receive instruction from them. She made the smallest amount of progress in the project, for both of the periods she worked with tutors.

Table 2

Tutee Results on CBAs(arranged by tutee)

Initials: B. H. 1st period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
Verbal Personal Info	9/4/12	3/17	10/16/12	8/17	+5
Reading For All Learners	9/4/12	0/11	10/16/12	9/11	+9
Signs For Sounds Spelling	9/4/12	2/10	10/16/12	3/10	+1
FRY Sight Words	9/4/12	0/20	10/16/12	8/20	+8
Initials: J. R. 1st period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
Signs For Sounds Spelling	9/4/12	2/10	10/16/12	2/10	+0
FRY Sight Words	9/5/12	1/20	10/16/12	13/20	+12
Reading For All Learners	9/7/12	6/11	10/16/12	6/11	+0
Verbal Personal Info	9/6/12	3/17	10/16/12	5/17	+2
Initials: I. E. 2nd period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
Dividing Fractions	9/6/12	0/12	10/16/12	11/12	+11
Written Personal Info	9/6/12	17/24	10/16/12	18/24	+1
Solving Decimal Equations	9/6/12	0/20	10/16/12	4/20	+4
Solving 2-Step Equations	9/6/12	0/20	10/16/12	1/20	+1
Solving Proportions	9/6/12	0/17	10/16/12	7/17	+7
Initials: S. H. 2nd period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
Written Personal Info	9/6/12	14/24	10/16/12	21/24	+7
Adding Fractions	9/6/12	3/12	10/16/12	12/12	+9
Dividing	9/6/12	5/16	10/16/12	15/16	+10
Signs For Sounds Spelling	9/6/12	26/30	10/16/12	27/30	+1
Initials: J. R. 5th period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
TouchMath Subtracting	9/6/12	0/5	10/17/12	3/5	+3
TouchMath Adding	9/6/12	1/5	10/17/12	3/5	+2
Money Recognition	9/6/12	13/16	10/17/12	13/16	+0
Initials: B. H. 5th period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
TouchMath Adding	9/5/12	0/5	10/15/12	4/5	+4
TouchMath Subtracting	9/5/12	1/5	10/15/12	2/5	+1
Money Recognition	9/5/12	1/16	10/15/12	4/16	+3
Initials: M. L. 6th period	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
Written Personal Info	9/5/12	17/24	10/17/12	18/24	+1
Reading For All Learners	9/17/12	194/203	10/17/12	199/203	+5
Signs for Sounds Spelling	9/5/12	27/30	10/17/12	25/30	-2
FRY Sight Words	9/5/12	17/20	10/17/12	20/20	+3

Table 3

Tutee Results on CBAs (arranged by curriculum)

Verbal Personal Info	**Date of Pre-test**	**Pre-test Score**	**Date of Post-test**	**Post-test Score**	**Difference Score (+/-)**
B. H.	9/4/12	3/17	10/16/12	8/17	+5
J. R.	9/6/12	3/17	10/16/12	5/17	+2
Written Personal Info					
I. E.	9/6/12	17/24	10/16/12	18/24	+1
S. H.	9/6/12	14/24	10/16/12	21/24	+7
M. L.	9/5/12	17/24	10/17/12	18/24	+1
Reading For All Learners					
B. H.	9/4/12	0/11	10/16/12	9/11	+9
J. R.	9/7/12	6/11	10/16/12	6/11	+0
M. L.	9/17/12	194/203	10/17/12	199/203	+5
Signs For Sounds Spelling					
B. H.	9/4/12	2/10	10/16/12	3/10	+1
J. R.	9/4/12	2/10	10/16/12	2/10	+0
S. H.	9/6/12	26/30	10/16/12	27/30	+1
M. L.	9/5/12	27/30	10/17/12	25/30	-2
FRY Sight Words					
B. H.	9/4/12	0/20	10/16/12	8/20	+8
J. R.	9/5/12	1/20	10/16/12	13/20	+12
M. L.	9/5/12	17/20	10/17/12	20/20	+3
TouchMath Adding					
J. R.	9/6/12	1/5	10/17/12	3/5	+2
B. H.	9/5/12	0/5	10/15/12	4/5	+4
TouchMath Subtracting					
J. R.	9/6/12	0/5	10/17/12	3/5	+3
B. H.	9/5/12	1/5	10/15/12	2/5	+1
Money Recognition					
J. R.	9/6/12	13/16	10/17/12	13/16	+0
B. H.	9/5/12	1/16	10/15/12	4/16	+3
I. E. Dividing Fractions	9/6/12	0/12	10/16/12	11/12	+11
I. E. Solving Decimal Equations	9/6/12	0/20	10/16/12	4/20	+4
I. E. Solving 2-Step Equations	9/6/12	0/20	10/16/12	1/20	+1
I. E. Solving Proportions	9/6/12	0/17	10/16/12	7/17	+7
S. H. Adding Fractions	9/6/12	3/12	10/16/12	12/12	+9
S. H. Dividing	9/6/12	5/16	10/16/12	15/16	+10

Research Question 3

The third research question related to tutor and tutee satisfaction. After completing a satisfaction survey, with 5 indicating responses that participants were *very satisfied* and a 1 indicating responses that were *very dissatisfied*, results show that tutors and tutees were relatively satisfied with the learning experience as shown in Table 4 and Table 5. The range of mean scores for each category was 4.0 to 4.71 for tutors and 4.71 to 5.0 for tutees.

Table 4

Mean Rating: Tutor Satisfaction Results

(1=Very Dissatisfied, 5=Very Satisfied)

Tutor Number	**Liked tutoring**	**Liked training**	**Would recommend**	**Would peer tutor again**
#1	5	4	5	5
#2	4	4	5	3
#3	5	4	5	5
#4	5	4	5	5
#5	4	3	4	4
#6	5	5	5	5
#7	4	4	4	5
Mean Score	*4.57*	*4*	*4.71*	*4.57*

Table 5

Mean Rating: Tutee Satisfaction Results

(1=Very Dissatisfied, 5=Very Satisfied)

Tutee Number	Liked having tutor	Tutor was a good helper	Liked tutor	Would like to have a peer tutor again
#1	5	5	5	5
#2	5	5	5	5
#3	5	5	5	5
#4	5	5	4	4
#5	5	4	5	5
#6	5	5	4	5
#7	5	5	5	5
Mean Score	*5*	*4.86*	*4.71*	*4.86*

Satisfaction

Satisfaction with this project was high, with mean scores of 4 out of 5 and above. Both tutors and tutees were pleased with the training and tutoring. Relationships were formed in the process and some tutors and tutees will have long-term effects from the peer tutoring experience. Tutors learned lessons that may affect how they see and work with individuals with disabilities in the future.

Implications

Implications for special educators are that peer tutors are an important asset in a class, especially with large class sizes. Peer tutoring allows tutees to receive more one-on-one instruction, and thus learn more than they would if peer tutors were not

present. Another implication relates to training tutors. Training tutors is time consuming, but much as recommended in previous research, training relates directly to effectiveness of the tutor and skill acquisition of the tutee.

Limitations

One limitation in this project was that praise statements, prompts, corrections, and data collection were not always observed or observed at 100% accuracy. Peer tutors were provided with a list of different praise statements, but were not required to keep it on the table in front of them. Most of them put it away when they first received it and it did not appear again. In the future it may be helpful to affix the list to the table/desk where the students are working to serve as a visual reminder of prompting. Since prompts, corrections, and data collection were not always observed, it may be better to have observations last longer. Six out of seven of the tutees in the project were new to the teacher. The new tutees might have been capable of more work.

Future Research

Future research may want to observe tutors working with tutees before training to see how much of an impact the training had on praise, prompts, corrections, and data collection. It may also be helpful to affix a list to the table where the tutor and tutee are working to serve as a visual reminder to the tutor to praise often. Others may also want to conduct observations for longer periods of time or successive sessions. It may be beneficial to have different people observe for different things (e.g., one to count praise

statements, one to observe for prompts, one to observe for corrections, and another to observe for data collection), although it may be difficult to find enough people for that.

Conclusion

Results were positive for this project, although they did not turn out 100% as I would expect. I still highly recommend peer tutoring and will continue using it. The benefits of using tutors far outweigh the costs. I will continue to use peer tutors to work one-on-one with my students with disabilities during the teaching of academics as well as social skills. I will continue to train them on the use of praise statements, a prompt hierarchy, correction procedures, and data collection, as it was found beneficial. I also believe that it is important to train tutors on other topics such as confidentiality, emergency specific information, class rules, accommodations, modifications, behavior management, etc. Having a quiz for tutors to complete after training is a great way to assess their knowledge of what was learned during training. Informal observations are important so teachers can see first-hand that programs are being run correctly. In the future I will affix a list of praise statements to each table to serve as a reminder for tutors to praise more frequently and I will train them to praise for every academic and behavioral success.

The findings from this project show that peer tutors in junior high are effective in increasing academic skills of tutees who have disabilities in a variety of academic areas. The project examines difference scores between pre- and post-tests for the tutor, observation scores for tutors, difference scores between pre- and post-tests on CBAs for

the tutee, and ratings of satisfaction for both tutor and tutee. As such, the project provides data establishing the utility of peer tutoring in the context of junior high instruction of students with significant disabilities.

References

Burns, E. (2006). Pause, prompt and praise - peer tutored for pupils with learning difficulties. *British Journal of Special Education*, *33*, 62-67.

Carlton, M. B., Litton, F. W., & Zinkgraf, S. A. (1985). The effects of an intraclass peer tutoring program on the sight-word recognition ability of students who are mildly mentally retarded. *Mental Retardation*, *23*, 74-78.

Laushey, K. M., & Heflin, L. J. (2000). Enhancing social skills of kindergarten children with autism through training of multiple peers as tutors. *Journal of Autism and Developmental Disorders*, *30*, 183-193.

Miracle, S. A., Collins, B. C., Schuster, J. W., & Grisham-Brown, J. (2002). Peer- versus teacher-delivered instruction: effects on acquisition and maintenance. *Education and Training in Mental Retardation, 36*, 373-385.

Schuster, J. Morse, T. E., Ault, M. J., Doyle, P. M., Crawford, M., & Wolery, M. (1998). Constant time delay with chained tasks: A review of the literature. *Education and Treatment of Children, 21,* 74-106.

Stenhoff, D. M., & Lignugaris/Kraft, B. (2007). A review of the effects of peer tutoring on students with mild disabilities in secondary settings. *Exceptional Children*, *74*, 8-30.

Tekin-Iftar, E. (2003). Effectiveness of peer delivered simultaneous prompting on teaching community signs to students with developmental disabilities. *Education and Training in Developmental Disabilities*, *38*, 77-94.

Utley, C. A., & Mortweet, S. L. (1997). Peer-mediated instruction and interventions. *Focus on Exceptional Children, 29, 1-23.*

West, E. A., & Billingsley, F. (2005). Improving the system of least prompts: A comparison of procedural variations. *Education And Training In Developmental Disabilities*, *40*, 131-144.

Appendix A

Name: _____ Date: _____

1. Do you have any experience as a peer tutor?
   _____YES _____NO

2. Do you have any special education (resource) classes on your schedule?
   _____YES _____NO

3. On a scale from 0-10, with 10 being the best, how well do you follow directions?
   ___0 ___1 ___2 ___3 ___4 ___5 ___6 ___7 ___8 ___9 ___10

Appendix B

Name: _____ Date: _____

Peer Tutor Quiz

1. How often should you praise students?
    a. Once a day
    b. Twice a day
    c. Three times a day
    d. Three times per minute

2. What happens when you don't praise students enough?
    a. They might get off task more often
    b. They might have behavior problems
    c. They ignore you
    d. They won't like you

3. What steps are part of the prompt hierarchy?
    a. One word, short question, long description, model
    b. Show the student how to do it
    c. Full physical assistance
    d. Partial physical assistance

4. What is a correction procedure?
    a. Give the correct answer and move on to the next questions
    b. Give the correct answer or say, "Let's take a look at that one again", and give the student another chance to respond correctly
    c. Tell the student "no" and have them try again until they get the right answer
    d. Tell the student "you're getting close" until they get the right answer

5. When should you use the correction procedure?
    a. When you feel like it
    b. Every time the error seems bad enough
    c. Every time a student makes an error
    d. Every other time a student makes an error

6. What are the steps in a correction procedure?
    a. Provide correct response, give the student another chance to respond, distract, re-cue, praise
    b. Provide correct response and move on to next question
    c. Provide correct response, give the student another chance to respond, move on to next question
    d. Tell the student "you're getting close" until they get the right answer

7. What is the shortest amount of time you should wait for a student to respond and/or process what you have said?
    a. 5 seconds
    b. 10 seconds
    c. 1 minute
    d. 3 minutes

8. What is the most important data to collect in tracking the progress of a student in academic performance (math or English)?
    a. Amount of time it took to respond to a question
    b. Appropriate versus inappropriate behavior
    c. Scores in standardized achievement tests administered once a year
    d. Correct, incorrect, and corrected with a prompt

9. Please fill out the data sheet below with the following information:
    - Student: Becky Buck
    - Objective: Counting Change
    - Date: 9/5
    - Lessons and Steps: Counting change from .01 - .10
    - PH: I
    - 1: You show the student 5¢; they count to 5¢; mark the data below
    - 2: You show the student 10¢; they count to 10¢; mark the data below
    - 3: You show the student 3¢; they count to 4¢; mark the data below; Explain:

      _____

      _____
    - 4: You show the student 4¢; they count to 4¢; mark the data below
    - 5: Explain your next step (remember to distract) and mark data below:

      _____

_____

_____

Student:_____ Objective:_____

_____

Data Key

+ Correct Response
O Incorrect Response
Ø Corrected with a Prompt

Prompt Hierarchy

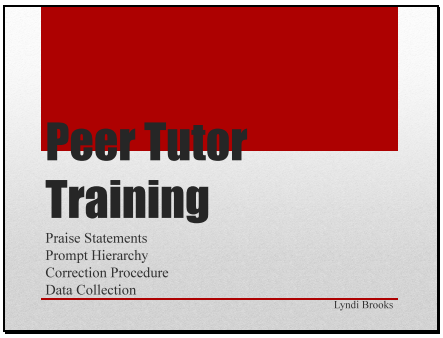
FP - Full Physical
PP - Partial Physical
FM - Full Model
PM - Partial Model
G - Gesture
FV - Full Verbal
PV - Partial Verbal
I - Independent

Date	Lessons & Steps	PH	1	2	3	4	5	6	7	8	9	10	Comments

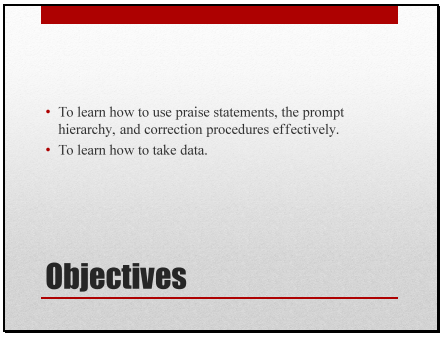
Appendix C

Power Point

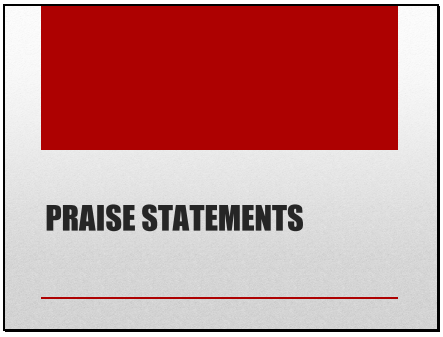
Slide 1



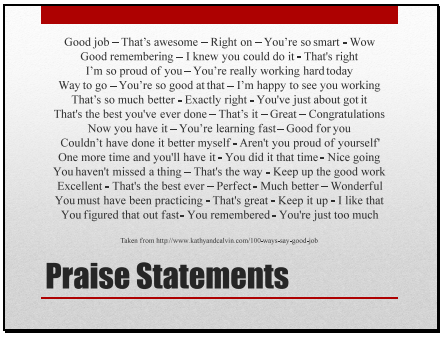
Slide 2



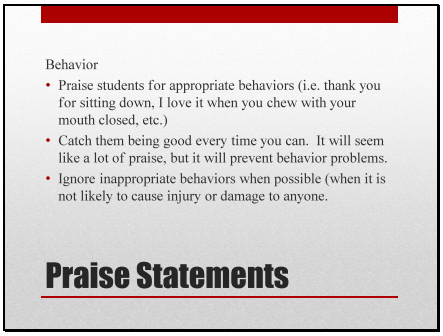
Slide 3



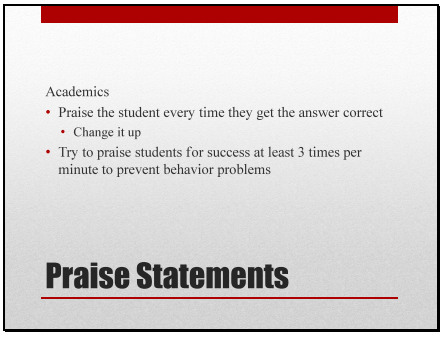
Slide 4



Slide 5

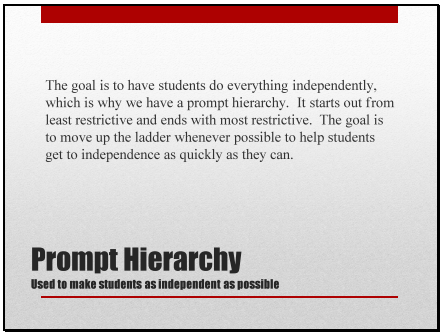


Slide 6

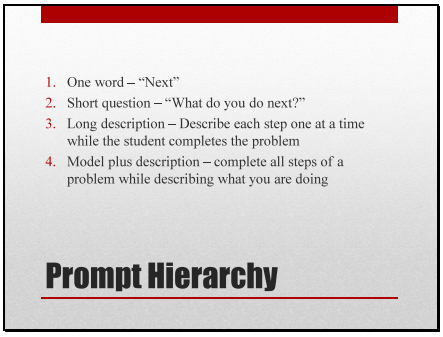


Slide 7

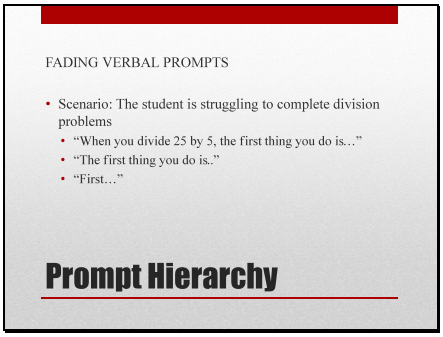
Slide 8



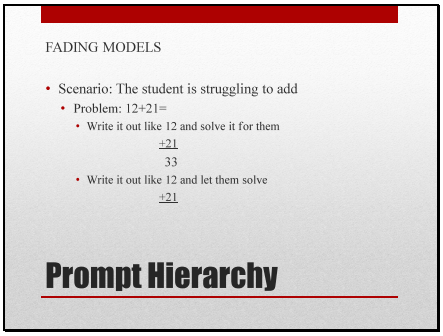
Slide 9



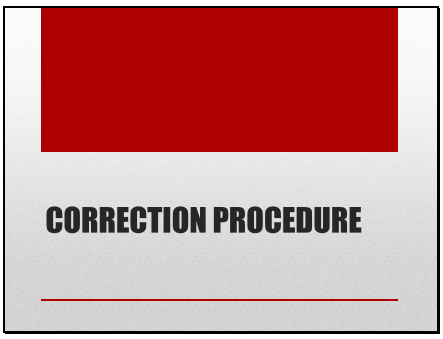
Slide 10



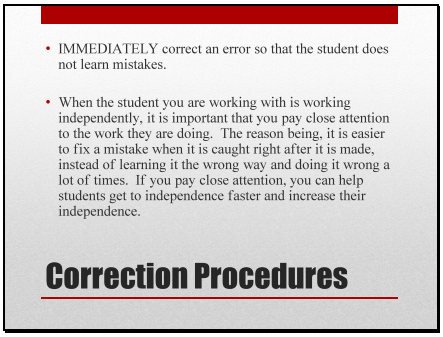
Slide 11



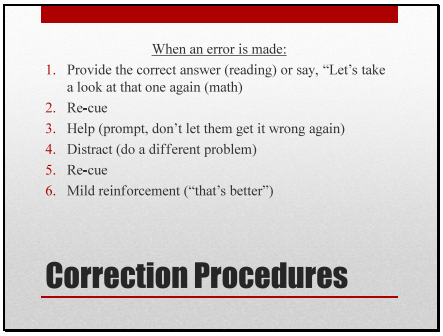
Slide 12



Slide 13



Slide 14



Slide 15

Video Example

Slide 16

- Practice in groups of 2
- Student – Make one mistake
- Teacher – Remember to praise for good behavior as well as correct answers; use the correction procedure when the student makes a mistake

Practice
Praise & Correction

Slide 17

DATA COLLECTION

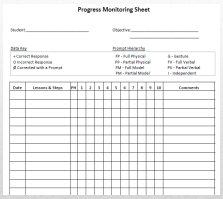
Slide 18

- If we did not take data, it would look as if we did not do anything.
- Data shows us where errors are being made, progress students make, etc.

Data Collection

Slide 19

Data Sheet Example


Progress Monitoring Sheet

Student:_____ Objective:_____

Data Key

+ Correct Response
0 Incorrect Response
Ø Corrected with a Prompt

Prompt Hierarchy

FP - Full Physical
PP - Partial Physical
FM - Full Model
PM - Partial Model
G - Gesture
FV - Full Verbal
PV - Partial Verbal
I - Independent

Date	Lessons & Steps	PH	1	2	3	4	5	6	7	8	9	10	Comments

Data Collection

Slide 20

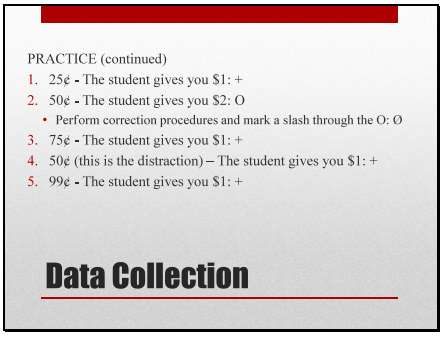
PRACTICE

You have a copy of a data sheet in front of you. We are gong to practice filling it out together.

1. Student name: Joe Black
2. Objective: Money Skills – Dollar More
3. Date: 9/5
4. Lesson Steps: Give $1 bill when given change amounts from .01 to .99.
5. PH: I

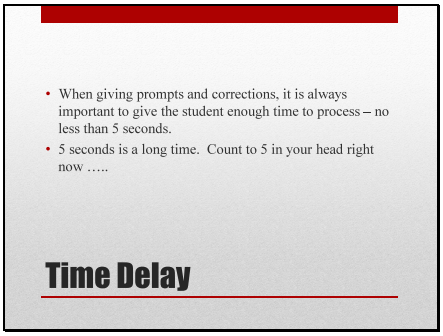
Data Collection

Slide 21



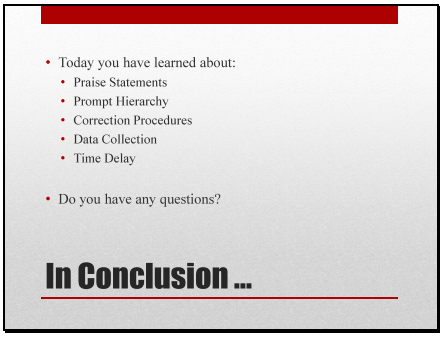
Slide 22

Slide 23



Slide 24

Slide 25



Appendix D

Peer Tutor Observation

Tutor Name: _____ Tutee Name: _____ Date: _____

Praise Statements

Minutes	**Minute 1**	**Minute 2**	**Minute 3**	**Minute 4**	**Minute 5**
# of praise statements given					

_____ Praise rate per minute

Data Collection

Subject	**Data**					

_____ % Data collected correctly

Prompt Hierarchy

#	Opportunity		Prompt				Comments
	Opportunity	Opportunity taken	One word	Short question	Long description	Model	Comments
1							
2							
3							
4							

_____ % Correct Prompt Opportunities (prompt applied divided by prompt opportunity identified plus used)

_____ % Correct Prompts (correct prompts divided by total opportunities)

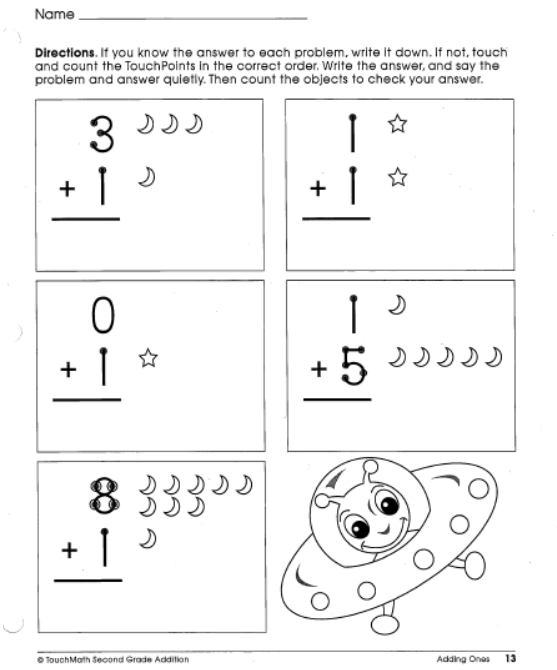
Correction Procedure

	Correction used	Provide correct response	Give learner another chance	Distract	Re-Cue	Praise	Comments
1							
2							
3							
4							

_____ % Complete Corrections (correction procedure used correctly divided by missed correction plus correct corrections)

Appendix E

TouchMath Adding Pre-/Post-test (1 digit)



Name _____

Directions. If you know the answer to each problem, write it down. If not, touch and count the TouchPoints in the correct order. Write the answer, and say the problem and answer quietly. Then count the objects to check your answer.

3 + 1 =

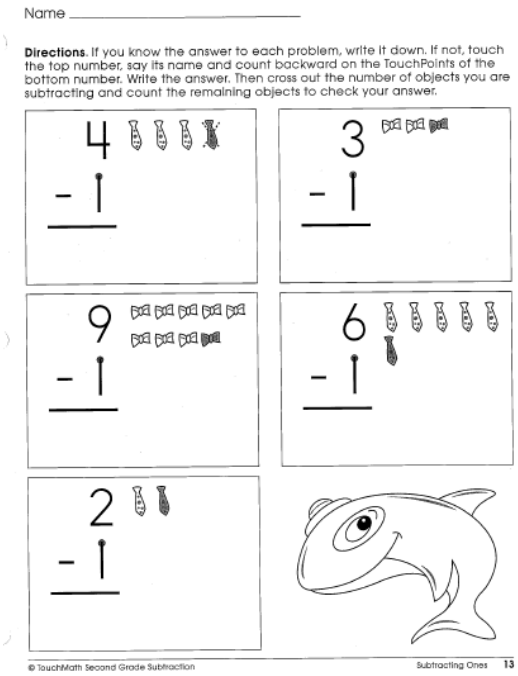
1 + 1 =

0 + 1 =

1 + 5 =

8 + 1 =

TouchMath Subtracting Pre-/Post-test (1 digit)



Name _____

Directions. If you know the answer to each problem, write it down. If not, touch the top number, say its name and count backward on the TouchPoints of the bottom number. Write the answer. Then cross out the number of objects you are subtracting and count the remaining objects to check your answer.

4 - 1 = ____

3 - 1 = ____

9 - 1 = ____

6 - 1 = ____

2 - 1 = ____

Money Value and Recognition Pre-/Post-test

Money Baseline/Recognition and Value

		Date_____	date_____	date_____
Recognizes:	penny	y n	y n	y n
	Nickel	y n	y n	y n
	Dime	y n	y n	y n
	Quarter	y n	y n	y n
	$1 bill	y n	y n	y n
	$5 bill	y n	y n	y n
	$10 bill	y n	y n	y n
	$20 bill	y n	y n	y n
Knows value	penny	y n	y n	y n
	Nickel	y n	y n	y n
	Dime	y n	y n	y n
	Quarter	y n	y n	y n
	$1 bill	y n	y n	y n
	$5 bill	y n	y n	y n
	$10 bill	y n	y n	y n
	$20 bill	y n	y n	y n
Rote counts pennies to		_____	_____	_____
Rote counts dollars to		_____	_____	_____

Adding Fractions Pre-/Post-test

Name: _____ SoftSchools Date: _____

Add Fractions.

1. $\frac{5}{16} + \frac{6}{16} =$ 2. $\frac{2}{5} + \frac{4}{5} =$ 3. $\frac{8}{10} + \frac{2}{5} =$ 4. $\frac{3}{12} + \frac{3}{8} =$

5. $\frac{2}{6} + \frac{3}{4} =$ 6. $\frac{6}{12} + \frac{1}{2} =$ 7. $\frac{2}{18} + \frac{8}{12} =$ 8. $\frac{8}{9} + \frac{3}{9} =$

9. $\frac{2}{5} + \frac{2}{3} =$ 10. $\frac{4}{5} + \frac{1}{2} =$ 11. $\frac{5}{8} + \frac{4}{8} =$ 12. $\frac{3}{5} + \frac{1}{3} =$

Dividing Fractions Pre-/Post-test

Name: _____ SoftSchools Date: _____

Divide Fractions.

1) $\frac{1}{4} \div \frac{4}{8} =$ 2) $\frac{1}{16} \div \frac{1}{8} =$ 3) $\frac{4}{6} \div \frac{3}{4} =$

4) $\frac{3}{4} \div \frac{8}{12} =$ 5) $\frac{5}{8} \div \frac{7}{8} =$ 6) $\frac{2}{3} \div \frac{4}{9} =$

7) $\frac{2}{3} \div \frac{2}{9} =$ 8) $\frac{3}{4} \div \frac{4}{28} =$ 9) $\frac{4}{8} \div \frac{2}{8} =$

10) $\frac{1}{8} \div \frac{3}{8} =$ 11) $\frac{6}{8} \div \frac{2}{8} =$ 12) $\frac{5}{6} \div \frac{6}{12} =$

Dividing Pre-/Post-test

Name: _____ SoftSchools Date: _____

Division worksheets

31 ⟌ 651	39 ⟌ 78	33 ⟌ 858	14 ⟌ 252
79 ⟌ 316	25 ⟌ 500	2 ⟌ 232	17 ⟌ 731
2 ⟌ 386	65 ⟌ 585	47 ⟌ 235	44 ⟌ 836
88 ⟌ 88	24 ⟌ 120	10 ⟌ 480	81 ⟌ 81

2-Step Multiplying Equations Pre-/Post-test

Name: _____ 2-Step multiplication equations SoftSchools Date: _____

SoftSchools worksheets

5Z+16 = 26	_____	2X+13 = 17	_____
2X+9 = 21	_____	5Z+4 = 24	_____
2Y+25 = 27	_____	5Z+11 = 26	_____
2Z+0 = 12	_____	3Y+5 = 20	_____
3X+2 = 17	_____	3Y+2 = 11	_____
4X+9 = 25	_____	3Y+2 = 14	_____
2X+12 = 16	_____	5Y+0 = 30	_____

Multiplying and Dividing Decimal Equations Pre-/Post-test

Name: _____ SoftSchools Date: _____

Decimal equations - multiplication & division - 1

1) $\frac{m}{11.77} = 99.1$

2) $17.9 = \frac{t}{1.47}$

3) $22.62 + 19.12 = \frac{m}{4.46}$

4) 49.27a = 397.492

5) $\frac{c}{7.93} = 84.27$

6) $\frac{z}{27.9} = 148.3$

7) (2.2 + 4.7)x = 48.3

8) (2 + 2.12)z = 37.08

9) 7.2n = 52.2 + 7.056

10) $7.5 = \frac{x}{2.21}$

11) $6.6 = \frac{n}{2.2+12.1}$

12) (4.6 + 6.4)p = 92.12

Solving Proportions Pre-/Post-test

Name: _____ SoftSchools Date: _____

Solve each Proportion. -3

1) $\frac{10}{m} = \frac{5}{4}$

2) $\frac{7}{9} = \frac{x}{6}$

3) $\frac{b}{2.7} = \frac{3.8}{4.9}$

4) $\frac{4.7}{c} = \frac{2.96}{4.4}$

5) $\frac{5.8}{n} = \frac{2.68}{9.9}$

6) $\frac{11.6}{6.8} = \frac{5.4}{m}$

7) $\frac{8}{7} = \frac{x+6}{6}$

8) $\frac{6y-6}{8y+10} = \frac{11}{10}$

9) $\frac{8}{6} = \frac{2y-6}{3y}$

10) $\frac{8}{5} = \frac{y-7}{3y+4}$

11) $\frac{10}{7} = \frac{b-5}{6b+4}$

12) $\frac{x+8}{x} = \frac{6}{5}$

FRY sight words Pre-/Post-test

The learner will be shown a word on a flash card and the teacher/researcher will mark the data sheet with a + or – . There are 8 phases of FRY words.

Fry instant words Phase I																
NAME																
a																
and																
are																
as																
for																
he																
his																
I																
in																
is																
it																
of																
on																
that																
the																
they																
to																
was																
with																
you																

Reading For All Learners Pre-/Post-test

Placement Test Score Sheet
Set 1 Books 1-26

Name _____
Date _____

I am Sam!
See me, Mat.
Mit sits in it, Sis.
Sim sees a man sit.
Ann sat on this and that.
Is Nan at the mess, Nat?
When will we meet sid?
She meets Ed with fun feet.
What fits Nell well?
Yes; I see them run.

Mistakes: _____
Mastery requirement: Read all sentences with no more than 4 mistakes

Mastery requirement met? Yes / No
If no, student placement is recommended starting with Set 1 Book 1

12

Placement Test Score Sheet
Set 2 Books 1-26

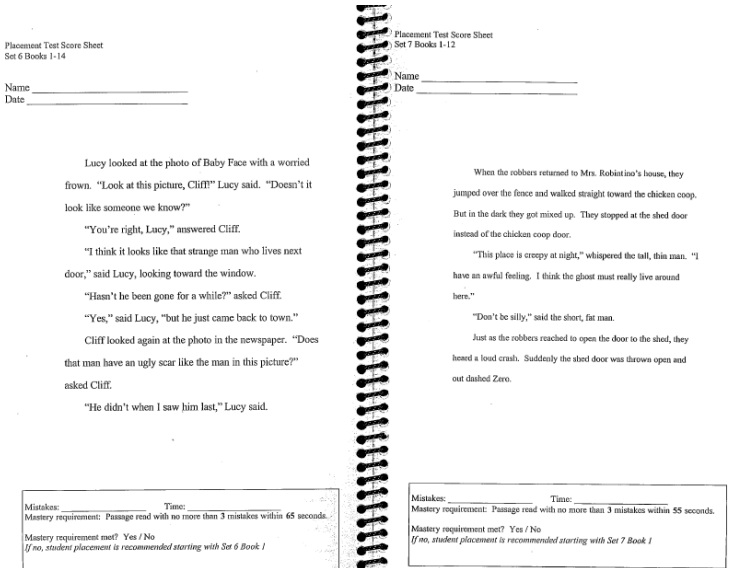
Name _____
Date _____

No, let the sheets fill with sand!
Sell the mud if it feels wet.
That fat rat is not sad!
He set a fish on the net.
Then Mat ran to the hill with nuts.
Was a fan with the weed hats?
Bat the ball into his hands.
Who met all the bad men?
"Hit this bell and win a wish," said Bill.
Sam has also had a bus.
Ben hid ants in that bed!

Mistakes: _____
Mastery requirement: Read all sentences with no more than 7 mistakes

Mastery requirement met? Yes / No
If no, student placement is recommended starting with Set 2 Book 1

13



Placement Test Score Sheet
Set 6 Books 1-14

Name _____
Date _____

Lucy looked at the photo of Baby Face with a worried frown. "Look at this picture, Cliff!" Lucy said. "Doesn't it look like someone we know?"

"You're right, Lucy," answered Cliff.

"I think it looks like that strange man who lives next door," said Lucy, looking toward the window.

"Hasn't he been gone for a while?" asked Cliff.

"Yes," said Lucy, "but he just came back to town."

Cliff looked again at the photo in the newspaper. "Does that man have an ugly scar like the man in this picture?" asked Cliff.

"He didn't when I saw him last," Lucy said.

Mistakes: _____ Time: _____
Mastery requirement: Passage read with no more than 3 mistakes within 65 seconds.

Mastery requirement met? Yes / No
If no, student placement is recommended starting with Set 6 Book 1

Placement Test Score Sheet
Set 7 Books 1-12

Name _____
Date _____

When the robbers returned to Mrs. Robistino's house, they jumped over the fence and walked straight toward the chicken coop. But in the dark they got mixed up. They stopped at the shed door instead of the chicken coop door.

"This place is creepy at night," whispered the tall, thin man. "I have an awful feeling. I think the ghost must really live around here."

"Don't be silly," said the short, fat man.

Just as the robbers reached to open the door to the shed, they heard a loud crash. Suddenly the shed door was thrown open and out dashed Zero.

Mistakes: _____ Time: _____
Mastery requirement: Passage read with no more than 3 mistakes within 55 seconds.

Mastery requirement met? Yes / No
If no, student placement is recommended starting with Set 7 Book 1

Signs for Sounds Spelling Pre-/Post-test

Signs for Sounds™ 1 Spell-Out Words Assessment Directions

Dictate each word in the list in order: say the number, say the word, use the word in a sentence, and repeat the word.

When the students have completed all the words, collect the assessment forms. Score each student's test by marking incorrect words. See the *Signs for Sounds Teacher's Manual* for suggestions on how to use the results to monitor progress and adapt the program.

1. a	16. were
2. I	17. from
3. the	18. what
4. will	19. when
5. to	20. your
6. you	21. there
7. and	22. said
8. are	23. each
9. of	24. which
10. for	25. how
11. they	26. do
12. have	27. all
13. was	28. about
14. one	29. she
15. or	30. their

Signs for Sounds™ Level 1 Spell-Out Words Student Assessment Form

Name: Date:

1.	16.
2.	17.
3.	18.
4.	19.
5.	20.
6.	21.
7.	22.
8.	23.
9.	24.
10.	25.
11.	26.
12.	27.
13.	28.
14.	29.
15.	30.

Verbal Personal Info Pre-/Post-test

Student: _____ Subject: Verbal Information

Name																	
Parents																	
Address																	
City																	
State																	
Phone																	
Today's Date																	
What season is it																	
Months of the year																	
Days of the week																	
Birth date																	
What grade are you in																	
How old are you																	
What's for lunch																	
Zip code																	
Favorite T.V. show																	
What day is it today																	
Dates:																	

Written Personal Info Pre-/Post-test

Baseline

Today's Date (xx/xx/xx)_____

First Name_____ Middle Name_____ Last Name_____

Name_____

Address_____

City_____State_____ Zip Code _____

Date_____

Telephone_____

Birth Date_____

Parent or Guardian_____

Marital Status _____Single _____Married

Sex _____Male _____Female

Signature _____

Height _____

Weight _____

Education _____

Street Address _____

Phone Number _____

Birthday _____

Gender _____Female _____Male

Home Address _____

Appendix F

Tutor

1. How well did you like being a peer tutor?

   5=OUTSTANDING LEARNING EXPERIENCE
   4=GOOD
   3=FAIR
   2=NOT SO GOOD
   1=HORRIBLE LEARNING EXPERIENCE

2. How well did you like the peer tutor training?

   5=OUTSTANDING LEARNING EXPERIENCE
   4=GOOD
   3=FAIR
   2=NOT SO GOOD
   1=HORRIBLE LEARNING EXPERIENCE

3. How likely are you to recommend peer tutoring to your friends?

   5=VERY LIKELY
   4=LIKELY
   3=NOT SURE
   2=NOT LIKELY
   1=NEVER IN A MILLION YEARS

4. How would you feel about being a peer tutor again?

   5=I'D LOVE IT
   4=SURE
   3=I'M NOT SURE
   2=DON'T REALLY WANT TO
   1=NEVER AGAIN

Tutee

1. How much did you like having a peer tutor?

5=VERY MUCH
4=MUCH
3=FAIR
2=NOT WELL
1=NOT AT ALL

2. How good of a helper was your peer tutor?

5=VERY GOOD
4=GOOD
3=FAIR
2=NOT GOOD
1=NOT AT ALL

3. How much did you like the peer tutor?

5=VERY MUCH
4=MUCH
3=FAIR
2=NOT WELL
1=NOT AT ALL

4. How would you feel about having a peer tutor again?

5=I'D LOVE ONE
4=SURE
3=I'M NOT SURE
2=DON'T REALLY WANT ONE
1=NEVER AGAIN